REMARKS

Previous Examiner Interview and Claim Amendments

A telephonic interview was conducted with Examiner B. Shrivastav and Kevin McEnaney. The independent claims were discussed. Prior art references U.S. Pat. No. 6,111,408, U.S. Pat. No. 5,043,664 and U.S. Pat. No. 6,147,490. Examiner Shrivastav requested the claims be amended in light of these references and to clarify the claimed subject matter. Specific claim amendments were discussed to better recite two aspects of the invention, first to recite use in a borehole environment and second to recite use in the presence of a primarily inhomogeneous field. Applicant adopted these suggestions in it Preliminary Amendment filed prior to the present Office Action.

103 Rejections

Notwithstanding Applicant's adopting the suggested claim amendments, the claims now stand rejected as being obvious in view of Blades (US 6,111,408) and Watanabe (US 6,147,490), both of which were discussed during the telephone interview prior to this Office Action.

Applicant respectfully asserts that the combination of Blades and Watanabe is improper as relating to divergent technologies. Blades relates to techniques for performing NMR analysis in a downhole fluid sampling tool. Watanabe relates to a medical diagnostic MRI device for use on human patients. As is the case for most of the diagnostic MRI prior art, the limitations of space and power available in a downhole environment preclude diagnostic MRI innovations from application on a wellbore tool. This is the case here, where the amount of power and type of MRI apparatuses discussed in Watanabe are simply not available on a downhole tool such as Blades. An alternative interpretation would obviate most of the recent patents related to downhole sampling tools incorporating NMR hardware and methodology.

With specific relation to the claim language, and the Office Action agrees, that Blades does not suggest the claimed "J-edit pulse sequence for developing J modulation" and then acquiring the NMR measurements using a "detection sequence." Wanatabe nowhere discloses its application outside the medical diagnostic field, such as to analyze formation samples, much less doing so "in a wellbore[borehole]," as specifically claimed by amendment. Thus, a person of ordinary skill in the art, when reading Wanatabe, would be left with the well accepted notion that

the limitation normally associated with downhole NMR would not allow application of Wanatabe to Blades' fluid sampling device.

CONCLUSION

For the foregoing reasons, Applicants submit that the application and claims stand in condition for allowance. Withdrawal of the rejections and allowance of the claims is respectfully requested.

Respectfully submitted,

Date: Nov 5 2004

IcEnancy, Reg. No. 46, 258 Schlumberger Technology Corporation

200 Gillingham Lane Sugar Land, TX 77478

Telephone:

281-285-7325

Facsimile:

281-285-4232

This Page is Inserted by IFW Indexing and Scanning Operations and is not part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:
☐ BLACK BORDERS
☐ IMAGE CUT OFF AT TOP, BOTTOM OR SIDES
☐ FADED TEXT OR DRAWING
☐ BLURRED OR ILLEGIBLE TEXT OR DRAWING
☐ SKEWED/SLANTED IMAGES
COLOR OR BLACK AND WHITE PHOTOGRAPHS
GRAY SCALE DOCUMENTS
LINES OR MARKS ON ORIGINAL DOCUMENT
☐ REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY

IMAGES ARE BEST AVAILABLE COPY.

As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.